

# Complications and Challenges in the Management of Iraqi Patients with B-Thalassemia Major: A Single-center Experience

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To the Editor,

In July 2020 issue of the *Oman Medical Journal*, Sadullah et al<sup>1</sup> addressed that no case of human immunodeficiency virus (HIV) infection was detected among patients with  $\beta$ -thalassemia major ( $\beta$ -TM) attending a center in the Northern Iraq. Though such finding supports a similar observation previously reported at the national level,<sup>2</sup> I still assume that the actual HIV seroprevalence among  $\beta$ -TM patients is underestimated. My assumption is based on the following two points.

First, although Iraq is considered a country with a low HIV/AIDS epidemic (0.1%), HIV risk factors has continued to increase since 2003 as a result of low literacy, poverty, gender-associated discrimination, and limited knowledge of modes of HIV transmission. Approximately, 57% of HIV cases were acquired by blood transfusion and blood products, although sexual transmission has increasingly become the major reported route of HIV transmission. The current state of constrained financial resources at governmental level, crisis of internally displaced people, socio-cultural barriers, and weak national preventive efforts are expected to increase the spread of HIV/AIDS in Iraq.<sup>3</sup> Consequently, the increase in HIV infection among  $\beta$ -TM patients is expected to parallel a similar increase in the general population.

Second, there are numerous laboratory tests to diagnose HIV infection. In Iraq, CD4 lymphocytes and viral overload estimations are often used in the clinical settings while fourth generation assay for combined P24 antigen and antibody detection are employed on limited basis. The latter

assay could better identify early HIV infection.<sup>4</sup> The need of  $\beta$ -TM patients for regular blood transfusion, limited awareness of public on HIV, limited availability of assay for detecting combined HIV antibody and P24 antigen, and noticeable variation in the diagnostic performance and cost of various commercial HIV test kits<sup>5</sup> could jointly contribute to the increased likelihood of acquisition of HIV infection in good numbers of  $\beta$ -TM patients in Iraq. Regrettably, Sadullah et al<sup>1</sup> didn't mention in the study methodology the exact diagnostic panel for HIV testing in their studied population.

Finally, the suboptimal care of  $\beta$ -TM patients reported by Sadullah et al<sup>1</sup> is similarly reported in other centers across the country.<sup>2</sup> With the expected surge in the  $\beta$ -TM prevalence in Iraq due to the culturally-preferred consanguineous marriage, I do agree with Sadullah et al<sup>1</sup> that strategic actions must be geared with the objective of improving the survival and quality of lives of the  $\beta$ -TM patients. Among these actions, pre-marital screening (PMS) is paramount. It helps alleviate the burden of various hereditary hemoglobinopathies, including  $\beta$ -TM on the national health care system and decrease suffering among at-risk couples. Actually, PMS has been found to decrease the affected birth rate of major hemoglobinopathies by 21.1% in a single center study in Iraq.<sup>6</sup> Establishment and intensification of the PMS in other centers across the country together with enhancing counseling programs and public health awareness are fundamental.

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